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REMARKS

Claims 1-14, 16, 17, 25-29, 31-42, 44, 45, 47-50, 52, 53, 97, 98, 101, 102, 105, 106, and 110 are pending in the present application.

Claims 1-110 have been rejected under 35 U.S.C. §102(e) as being anticipated by Fujii et al. (US-A-6,429,506). This rejection under 35 U.S.C. §102(e) over Fujii et al. is respectfully traversed.

In formulating the rejection under 35 U.S.C. §102(e), the Examiner alleges that Fujii et al. teaches:

...a method of protecting a MEMS structure during dicing including preparing a MEMS wafer having a plurality of structures thereon, mounting a cap to produce a laminated MEMS wafer, the cap being recessed in areas corresponding to locations of the MEMS structure sites, dicing the wafer into a plurality of MEMS dies, and removing the cap. Also disclosed are suggestions to use various known materials and methods in forming the structure.

From the above allegations, the Examiner has concluded that Fujii et al. anticipates claims 1-110. This position by the Examiner is respectfully traversed.

ARGUMENTS DIRECTED TO THE 35 U.S.C. §102(e) REJECTION OF CLAIM 1

The present invention, as set forth by amended independent claim 1, is a method for protecting a MEMS structure during a dicing of a MEMS wafer to produce individual MEMS dies. The claimed method prepares a MEMS wafer having a plurality of MEMS structure sites thereon; mounts, upon a front side of the MEMS wafer, a wafer cap to produce a laminated MEMS wafer, the wafer cap being recessed in areas corresponding to locations of the MEMS structure sites on the MEMS wafer, the front side of the MEMS wafer being a same side as a side having the MEMS structure sites located thereon; applies a contiguous tape on a backside of the MEMS wafer, the backside of the MEMS wafer being a side opposite of a side having the MEMS structure sites located thereon; dices the laminated MEMS wafer into a plurality of MEMS dies;

places a MEMS die into a package; and removes, after placement of the MEMS die in the package, the wafer cap.

In contrast to the explicit language of amended independent claim 1, Fujii et al. teaches that the wafer cap is removed prior to the placement of a MEMS die in a package.

In summary, contrary to the Examiner's assertions, Fujii et al. fails to teach that the wafer cap is removed after the placement of a MEMS die in a package, as set forth by amended independent claim 1.

Accordingly, the Examiner is respectfully requested, in view of the above amendments and remarks, to withdraw the present rejection of independent claim 1.

ARGUMENTS DIRECTED TO THE 35 U.S.C. §102(e) REJECTION OF CLAIM 8

The present invention, as set forth by dependent claim 8, provides for the wafer cap to include an adhesive medium, and the adhesive medium is a heat releasable medium.

In contrast to the explicit language of dependent claim 8, Fujii et al. teaches that heat can be applied to the semiconductor wafer without lessening the adhesion of the adhesives (see column 4, lines 15-20 of Fujii et al.).

In summary, contrary to the Examiner's assertions, Fujii et al. fails to teach a wafer cap that includes heat releasable adhesive medium. Accordingly, the Examiner is respectfully requested, in view of the above remarks, to withdraw the present rejection of dependent claim 8.

ARGUMENTS DIRECTED TO THE 35 U.S.C. §102(e) REJECTION OF CLAIM 9

The present invention, as set forth by dependent claim 9, provides for the wafer cap to include an adhesive medium, and the adhesive medium is a combination of an ultraviolet light and heat releasable medium.

In contrast to the explicit language of dependent claim 9, Fujii et al. teaches that heat can be applied to the semiconductor wafer without lessening the adhesion of the adhesives (see column 4, lines 15-20 of Fujii et al.).

In summary, contrary to the Examiner's assertions, Fujii et al. fails to teach a wafer cap that includes an ultraviolet light and heat releasable adhesive medium. Accordingly, the Examiner is respectfully requested, in view of the above remarks, to withdraw the present rejection of dependent claim 9.

ARGUMENTS DIRECTED TO THE 35 U.S.C. §102(e) REJECTION OF CLAIM 25

The present invention, as set forth by dependent claim 25, provides for the wafer cap comprising a silicon-based material.

In contrast to the explicit language of dependent claim 25, Fujii et al. teaches that the wafer cap is polymer film.

In summary, contrary to the Examiner's assertions, Fujii et al. fails to teach a wafer cap comprising a silicon-based material. Accordingly, the Examiner is respectfully requested, in view of the above remarks, to withdraw the present rejection of dependent claim 25.

ARGUMENTS DIRECTED TO THE 35 U.S.C. §102(e) REJECTION OF CLAIM 27

The present invention, as set forth by dependent claim 27, provides for the wafer cap comprising a glass-based material.

In contrast to the explicit language of dependent claim 27, Fujii et al. teaches that the wafer cap is polymer film.

In summary, contrary to the Examiner's assertions, Fujii et al. fails to teach a wafer cap comprising a glass-based material. Accordingly, the Examiner is respectfully requested, in view of the above remarks, to withdraw the present rejection of dependent claim 27.

ARGUMENTS DIRECTED TO THE 35 U.S.C. §102(e) REJECTION OF CLAIM 28

The present invention, as set forth by dependent claim 28, provides for the wafer cap comprising a ceramic-based material.

In contrast to the explicit language of dependent claim 28, Fujii et al. teaches that the wafer cap is polymer film.

In summary, contrary to the Examiner's assertions, Fujii et al. fails to teach a wafer cap comprising a ceramic-based material. Accordingly, the Examiner is respectfully requested, in view of the above remarks, to withdraw the present rejection of dependent claim 28.

ARGUMENTS DIRECTED TO THE 35 U.S.C. §102(e) REJECTION OF CLAIM 31

The present invention, as set forth by amended independent claim 31, is a method for protecting a MEMS structure during a production of individual MEMS dies. The method fabricates a MEMS wafer having a plurality of MEMS structure sites thereon; fabricates a wafer cap; bonds, upon a front side of the MEMS wafer, the wafer cap to the MEMS wafer to produce a laminated MEMS wafer, the wafer cap being recessed in areas corresponding to locations of the MEMS structure sites on the MEMS wafer, the front side of the MEMS wafer being a same side as a side having the MEMS structure sites located thereon; applies a contiguous tape on a backside of the MEMS wafer, the backside of the MEMS wafer being a side opposite of a side having the MEMS structure sites located thereon; dices the laminated MEMS wafer into a plurality of MEMS dies; places a MEMS die into a package; and removes, after placement of the MEMS die in the package, the wafer cap.

In contrast to the explicit language of amended independent claim 31, Fujii et al. teaches that the wafer cap is removed prior to the placement of a MEMS die in a package.

In summary, contrary to the Examiner's assertions, Fujii et al. fails to teach that the wafer cap is removed after the placement of a MEMS die in a package, as set forth by amended independent claim 31.

Accordingly, the Examiner is respectfully requested, in view of the above amendments and remarks, to withdraw the present rejection of independent claim 31.

ARGUMENTS DIRECTED TO THE 35 U.S.C. §102(e) REJECTION OF CLAIM 38

The present invention, as set forth by dependent claim 38, provides for the wafer cap to include an adhesive medium, and the adhesive medium is a heat releasable medium.

In contrast to the explicit language of dependent claim 38, Fujii et al. teaches that heat can be applied to the semiconductor wafer without lessening the adhesion of the adhesives (see column 4, lines 15-20 of Fujii et al.).

In summary, contrary to the Examiner's assertions, Fujii et al. fails to teach a wafer cap that includes heat releasable adhesive medium. Accordingly, the Examiner is respectfully requested, in view of the above remarks, to withdraw the present rejection of dependent claim 38.

ARGUMENTS DIRECTED TO THE 35 U.S.C. §102(e) REJECTION OF CLAIM 39

The present invention, as set forth by dependent claim 39, provides for the wafer cap to include an adhesive medium, and the adhesive medium is a combination of an ultraviolet light and heat releasable medium.

In contrast to the explicit language of dependent claim 39, Fujii et al. teaches that heat can be applied to the semiconductor wafer without lessening the adhesion of the adhesives (see column 4, lines 15-20 of Fujii et al.).

In summary, contrary to the Examiner's assertions, Fujii et al. fails to teach a wafer cap that includes an ultraviolet light and heat releasable adhesive medium. Accordingly, the Examiner is respectfully requested, in view of the above remarks, to withdraw the present rejection of dependent claim 39.

ARGUMENTS DIRECTED TO THE 35 U.S.C. §102(e) REJECTION OF CLAIM 47

The present invention, as set forth by dependent claim 47, provides for the wafer cap comprising a silicon-based material.

In contrast to the explicit language of dependent claim 47, Fujii et al. teaches that the wafer cap is polymer film.

In summary, contrary to the Examiner's assertions, Fujii et al. fails to teach a wafer cap comprising a silicon-based material. Accordingly, the Examiner is respectfully requested, in view of the above remarks, to withdraw the present rejection of dependent claim 47.

ARGUMENTS DIRECTED TO THE 35 U.S.C. §102(e) REJECTION OF CLAIM 48

The present invention, as set forth by dependent claim 48, provides for the wafer cap comprising a glass-based material.

In contrast to the explicit language of dependent claim 48, Fujii et al. teaches that the wafer cap is polymer film.

In summary, contrary to the Examiner's assertions, Fujii et al. fails to teach a wafer cap comprising a glass-based material. Accordingly, the Examiner is respectfully requested, in view of the above remarks, to withdraw the present rejection of dependent claim 48.

ARGUMENTS DIRECTED TO THE 35 U.S.C. §102(e) REJECTION OF CLAIM 49

The present invention, as set forth by dependent claim 49, provides for the wafer cap comprising a ceramic-based material.

In contrast to the explicit language of dependent claim 49, Fujii et al. teaches that the wafer cap is polymer film.

In summary, contrary to the Examiner's assertions, Fujii et al. fails to teach a wafer cap comprising a ceramic-based material. Accordingly, the Examiner is respectfully requested, in view of the above remarks, to withdraw the present rejection of dependent claim 49.

ARGUMENTS DIRECTED TO THE REJECTION OF CLAIMS 97 & 98

The present invention, as set forth by dependent claims 97 and 98, provides for the wafer cap comprising a metal.

In contrast to the explicit language of dependent claims 97 and 98, Fujii et al. teaches that the wafer cap is polymer film.

In summary, contrary to the Examiner's assertions, Fujii et al. fails to teach a wafer cap comprising a metal. Accordingly, the Examiner is respectfully requested, in view of the above remarks, to withdraw the present rejection of dependent claims 97 and 98.

ARGUMENTS DIRECTED TO THE REJECTION OF CLAIMS 101 & 102

The present invention, as set forth by dependent claims 101 and 102, provides for the wafer cap comprising a static dissipative material.

In contrast to the explicit language of dependent claims 101 and 102, Fujii et al. teaches that the wafer cap is polymer film.

In summary, contrary to the Examiner's assertions, Fujii et al. fails to teach a wafer cap comprising a static dissipative material. Accordingly, the Examiner is respectfully requested, in view of the above remarks, to withdraw the present rejection of dependent claims 101 and 102.

ARGUMENTS DIRECTED TO THE REJECTION OF CLAIMS 105 & 106

The present invention, as set forth by dependent claims 105 and 106, provides for the contiguous tape comprising a static dissipative material.

In contrast to the explicit language of dependent claims 105 and 106, Fujii et al. fails to teach the exact composition of the contiguous tape.

In summary, contrary to the Examiner's assertions, Fujii et al. fails to teach a contiguous tape comprising a static dissipative material. Accordingly, the Examiner is respectfully requested, in view of the above remarks, to withdraw the present rejection of dependent claims 105 and 106.

**ARGUMENTS DIRECTED TO THE 35 U.S.C. §102(E) REJECTION OF THE
REMINAING NON-DISCUSSED DEPENDENT CLAIMS**

With respect to the remaining non-discussed rejected dependent claims, the Applicants, for the sake of brevity, will not address the reasons supporting patentability for each of these individual dependent claims, as these claims depend directly or indirectly from the various allowable independent claims for the reasons set forth above. The Applicants reserve the right to address the patentability of each of these dependent claims at a later time, should it be necessary.

CONCLUSION

Accordingly, in view of the amendments and remarks set forth above, the Examiner is respectfully requested to reconsider and withdraw this rejection of claims 1-110 under 35 U.S.C. §102(e) as being anticipated by Fujii et al. Also, an early indication of allowability is earnestly solicited.

Respectfully submitted,


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